

ABSTRACT:

Surface-modified, doped, pyrogenically produced oxides surface-modified by spraying pyrogenically produced oxides doped by aerosol under intensive mixing with a surface-modification reagent or a mixture of several surface-modification reagents. These surface-modification reagents include organosilanes, silazanes, cyclic polysiloxanes, polysiloxanes or silicone oils. The organosilanes include: $(RO)_3Si(C_nH_{2n+1})$, $(RO)_3Si(C_nH_{2n-1})$; $R'x$ $(RO)_ySi(C_nH_{2n+1})$; $(RO)_3Si(C_nH_{2n+1}) X_3 Si(C_nH_{2n+1})$, $X_3 Si(C_nH_{2n-1})$; $X_2 (R') Si(C_nH_{2n+1})$, $(RO)_ySi(C_nH_{2n+1})$; $(RO)_3Si(C_nH_{2n+1}) X (R')_2 Si(C_nH_{2n+1})$; $X (R')_2 Si(C_nH_{2n-1})$; $(RO)_3Si(CH_2)_m-R'$; $(R'')_x X_2 (R') Si(C_nH_{2n-1})$; $X (R')_2 Si(C_nH_{2n+1})$; $X (R')_2 Si(C_nH_{2n-1})$; $(RO)_ySi(CH_2)_m-R'$; $X_3 Si(CH_2)_m-R'$; $(R)X_2Si(CH_2)_m-R'$, and $(R)_2X Si(CH_2)_m-R'$. The silazanes include $R'R_2Si-N-Si(H)R_2R'$. The surface-modification permits the pyrogenically-produced oxides to be more rapidly worked into organic systems, e.g. polyester resins, at higher concentrations.